Remarks

The present Amendment is in response to the Official Action mailed on July 26, 2005. A petition and fee for a one-month extension of the three-month shortened statutory deadline for response are enclosed. A Request for Continued Examination and a Declaration Under 37 C.F.R. §1.132 are also enclosed.

The Official Action rejected claims 1, 3-15 and 18-22 under 35 U.S.C. § 103(a) as assertedly being obvious over the Miles et al. U.S. Patent No. 6,384,463 ("Miles") and in view of the Keri U.S. Patent No. 5,861,656 ("Keri"). Claims 4 and 5 were previously cancelled. Claims 1, 8 and 14 have been amended to be more clear and distinct. Claims 1, 3, 6-15 and 18-22 are presently pending.

The Rejection Under 35 U.S.C. § 103(a)

Claims 1, 3-15 and 18-22 stand rejected under 35 U.S.C. § 103(a) as assertedly being obvious over Miles and in view of Keri. Applicants respectfully traverse this rejection and request that it now be withdrawn, in view of the above amendments of the claims, the Declaration Under 37 C.F.R. §1.132, and the discussion below.

Miles discloses a high voltage guard ring for protecting a sensitive low voltage area from a high voltage area on the same integrated circuit. Col. 1, lines 10-12; and col. 2, lines 31-34. FIGS. 2 and 3 show a metal guard ring 6, beneath which is a silicon guard ring 8. The metal guard ring 6 and silicon guard ring 8 are electrically connected together and are also connected to

a low impedance voltage source, or ground. Col. 2, line 32- col. 3, line 25; col. 1, lines 36-47. The "metal" guard ring could be replaced by other equivalent substitutes, e.g. an alternative conductor such as polysilicon. Col. 4, lines 1-6. Referring to FIGS. 1 and 3, if high voltages in the high voltage area 3 of the integrated circuit cause high energy particles to migrate across the surface of the device towards the low voltage area, they are attracted to the metal guard ring 6 and their charge is conducted to ground to prevent them from moving into the low voltage area. Col. 3, lines 25-36.

Keri discloses a grounded metal conductor 30 shown in FIGS. 5 and 6 which surrounds almost a whole integrated circuit chip and at several locations extends inwardly from its circumference. By opening up the passivation 18 above metal conductors 30 and 32 that are connected to ground or potential near ground as compared to applied voltage, the charging of the passivating surface can be prevented or delayed. The non-passivated metal that extends from the circumference of the chip forms a sort of channel/trap for charge carriers that are transported on the passivating surface. Col. 2, line 66 – col. 3, line 12.

A Declaration Under 37 C.F.R. § 1.132 is attached. In the Declaration, Vincent E. Houtsma avers that he is a co-inventor of this patent application, and that he received a Masters degree in physics and a Ph.D. in electrical engineering from the Twente University in the Netherlands. Dr. Houtsma further avers that from April, 2000 to the present he has been employed by Lucent Technologies, Inc., and that his current position is as a Member of the Technical Staff in the High Speed Electronics business.

Dr. Houtsma avers that based on his scientific experience and his review of the cited prior art, the cited prior art does not teach or suggest a semiconductor absorber and dissipative

conductor combination configured to dissipate electromagnetic radiation within a center frequency range between about 1 gigahertz and about 1,000 gigahertz.

Dr. Houtsma additionally avers that based on his scientific experience, he concludes that the cited prior art teaches guard rings that are configured to provide shielding from static electric fields rather than to dissipate high frequency electromagnetic fields.

Dr. Houtsma further avers that based on his scientific experience it does not necessarily follow that a guard ring configured to provide static shielding as in the cited prior art would significantly dissipate incident electromagnetic radiation in the frequency range of about 1 gigahertz and about 1,000 gigahertz. Dr. Houtsma also avers that a guard ring configured to dissipate electromagnetic radiation in the above-cited frequency range would have to be made of a material with a resistivity higher than typically desired in guard rings for shielding of static electric fields.

In view of the above discussion, each of Miles and Keri fails to disclose and fails to suggest a semiconductor absorber and dissipative conductor combination which is configured to dissipate electromagnetic radiation having a center frequency within a range of between about 1 gigahertz and about 1,000 gigahertz. Miles discloses a conductive guard ring formed from metal, polysilicon or an equivalent conductor. The conductive guard ring is interposed between low and high voltage areas of an integrated circuit. The conductive guard ring protects the low voltage area from the high voltage area by attracting high energy particles that escape from the high voltage area, and conducting the electric charge of such high energy particles to ground. The function of Miles' conductive guard ring is to provide shielding from static electric fields. Miles does not disclose and does not suggest a semiconductor absorber and dissipative conductor

combination having a function to dissipate electromagnetic radiation having a center frequency within a range of between about 1 gigahertz and about 1,000 gigahertz.

Keri discloses grounded metal conductors 30 and 32 that form a sort of channel/trap for charge carriers that are transported on a passivating surface. The function of Keri's grounded metal conductors is to provide shielding from static electric fields. Keri does not disclose and does not suggest a semiconductor absorber and dissipative conductor combination having a function to dissipate electromagnetic radiation having a center frequency within a range of between about 1 gigahertz and about 1,000 gigahertz.

Each of Miles and Keri discloses a guard ring configured to provide shielding from static electric fields rather than to dissipate high frequency electromagnetic fields. It does not necessarily follow that a guard ring configured to provide static shielding as disclosed in Miles and Keri would significantly dissipate incident electromagnetic radiation in the frequency range of about 1 gigahertz and about 1,000 gigahertz. A guard ring configured to dissipate electromagnetic radiation in the above-cited frequency range would have to be made of a material with a resistivity higher than typically desired in guard rings, as disclosed in Miles and Keri, for shielding of static electric fields.

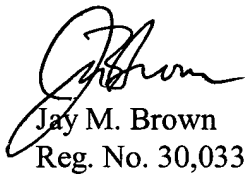
The Official Action attempts to substantiate a rejection of claims 1, 3-15 and 18-22 under 35 U.S.C. § 103(a) by combining Miles and Keri. Each of Miles and Keri fails to disclose and fails to suggest a semiconductor absorber and dissipative conductor combination, as recited in independent claims 1 and 14, which is configured to dissipate electromagnetic radiation having a center frequency within a range of between about 1 gigahertz and about 1,000 gigahertz. Accordingly, the combination of Miles and Keri together likewise fails to disclose or suggest

such a semiconductor absorber and dissipative conductor combination. Claims 3 and 6-13 depend from claim 1; and claims 15 and 18-22 depend from claim 14.

Conclusion

Since all of the pending claims, as amended, are not anticipated by and are unobvious over the cited references, Applicants believe that this application is now in order for allowance. The Examiner is respectfully requested and invited to contact the undersigned by telephone in order to resolve any remaining issues.

Respectfully submitted,



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